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Comparative Environmental Analysis

Draft Scoping Document

for

Sandpiper Pipeline and Line 3 Pipeline Replacement

PUC Dockets PPL-13-474 and PPL-15-137

Minnesota Department of Commerce

Energy Environmental Review and Analysis

August 2015

INTRODUCTION

On June 5, 2015, the Minnesota Public Utilities Commission (Commission) granted a Certificate of Need (CN) to the North Dakota Pipeline Company, LLC (NDPC) for its proposed Sandpiper Pipeline project (Docket No. CN-13-473). In a related action, the Commission directed the Office of Administrative Hearings (OAH) to restart the Route Permit proceedings for the Sandpiper Pipeline (Docket No: PPL-13-474), which had been on hold pending the Commission's decision on the CN.

As a part of the "restart" for the Route Permit proceedings, the Commission requested that the Department of Commerce (DOC) Environmental Review and Analysis (EERA) staff file a document outlining the scope of the Comparative Environmental Analysis (CEA) to be conducted for the Sandpiper Pipeline and the time required to complete it.

In addition, on July 1, 2015, the Commission accepted Enbridge Energy's (Enbridge) applications for a CN and route permit (Docket No: PPL-15-137) for the Line 3 Pipeline Replacement Project as complete, initiating the two review processes for that project. As with Sandpiper, the route permit process for this proposal also triggers the preparation of a CEA.

Due to the significant overlap in the applicants' preferred routes for these two project, EERA anticipates analyzing them both within one CEA.

This Draft Scoping Document is intended to delineation the issues and analyses to be contained in the CEA for these two projects based on past orders issued by the Commission related to the two projects and input received through public meetings and comment periods.

ENVIRONMENTAL REVIEW REQUIREMENTS FOR PIPELINES

The environmental review process for pipelines generally parallels the environmental review requirements of Minnesota Rules Chapter 4410, while providing for an integrated environmental review and permitting process, rather than two separate review processes (environmental and permitting).

The Minnesota Environmental Quality Board (EQB) developed and approved of the pipeline routing rules (now Chapter 7852) as an alternative form of environmental review pursuant to the requirements of Minnesota Rules 4410.3600 [Alternative Review] on February 16, 1989. This alternative form of environmental review requires preparation of a comparative environmental analysis (CEA), which evaluates both the issues raised during through public comments and the alternative routes authorized by the Commission for consideration at public hearing.

Critical to development and approval of the pipeline routing rules was incorporation of the equivalent environmental review requirements established by Minnesota Rules 4410.3600, subp1., items A. through H., to allow for approval of the pipeline rules as an alternative form of environmental review and also to provide for timely review and elimination of duplication.

Upon completion of the rulemaking process, the EQB then determined that the pipeline routing rules satisfied all the conditions for approval as a substitute form of environmental review as provided by Minn. Rules 4410.3600, subp.1, items A. through H.

Consequently, pipelines subject to the routing rules are not reviewed through environmental assessment worksheets (EAWs) or environmental impact statements (EISs), but receive equivalent review under the routing and permitting process established by the pipeline routing rules (Minnesota Rules Chapter 7852).

PROJECT DESCRIPTION AND PURPOSE

Sandpiper Pipeline Project

NDPC proposed Sandpiper Pipeline Project (Sandpiper) begins at NDPC's Beaver Lodge Station, south of Tioga, North Dakota, extends to a new terminal facility to be constructed at Clearbrook, Minnesota, and then continues on to an Enbridge affiliate's terminal and tank farm in Superior, Wisconsin.

The Project is comprised of a new 612-mile 24-inch and 30-inch outside diameter crude oil pipeline and associated facilities described as follows. Approximately 299 miles of the Project will be located in Minnesota.

From the North Dakota border in Polk County to Clearbrook, Minn., in Clearwater County, approximately 75 miles of 24-inch outside diameter (OD) steel pipe, with an average annual capacity of 225,000 barrels per day d(bpd), would generally parallel and be adjacent to NDPC's existing Line 81.

The Sandpiper Pipeline segment between Clearbrook, Minnesota and the Wisconsin border, approximately 224 miles, will be 30-inch OD steel pipeline and have an annual average capacity of 375,000 bpd.

Between Clearbrook and the city of Hubbard, the NDPC preferred route generally parallels the existing Minnesota Pipeline Company right-of-way. Between the city of Hubbard and the Wisconsin border, the NDPC preferred route turns east, following portions of existing electrical transmission and railroad rights-of-way.

As part of the Project, NDPC also proposes to develop a new terminal facility in Clearbrook, Minnesota. The new terminal will consist of two crude oil storage tanks holding approximately 150,000 barrels (bbls) or 6,300,000 gallons each, two 500 horse power (HP) injection pumps to move up to 150,000 barrels per day (BPD) from the existing NDPC Line into Sandpiper, two 650 HP transfer pumps for delivery to NDPC, and three sets of leak detection meters. A new Clearbrook Pump Station will be located within the foot print of the new NDPC Clearbrook Terminal.

The project will include approximately 23 mainline safety valves.

Line 3 Replacement Project

As proposed, the Line 3 Replacement Project will replace 282 miles of 34-inch pipeline with 337 miles of new 36-inch diameter pipeline. Line 3 was originally constructed as a series of loops beginning in 1962 and placed into service in 1968.[1] The integrity management plan for Line 3 has seen an increasing number of integrity digs and repairs in recent years. Starting in 2008, Enbridge voluntarily reduced the pressure and capacity of Line 3 to 390 thousand barrels per day (bpd). The Line 3 Replacement Project will restore the line to its historical operating capacity of 760,000 bpd from its current capacity of 390,000 bpd.

Associated facilities for the project include upgrading four existing pump stations and adding an additional four pump stations at new locations. The project will also include 27 safety valves.

Enbridge's preferred route for the Line 3 Replacement Pipeline follows the existing Enbridge mainline corridor west of Clearbrook, Minnesota, in Kittson, Marshall, Pennington, Red Lake, Polk and Clearwater counties to the terminal in Clearbrook. East of Clearbrook, the preferred route follows approximately 75 percent of existing utility corridors in Hubbard, Wadena, Cass, Crow Wing, Aitkin and Carlton counties. If a route permit is issued for the preferred route of the Sandpiper Pipeline, Line 3 will be adjacent to Sandpiper east of Clearbrook to the Minnesota/Wisconsin border.[2]

Once Line 3 Replacement construction is complete and in service, existing Line 3 will be permanently deactivated and remain in place.

PUBLIC MEETINGS AND COMMENTS – SCOPING PROCESS

Between March 3, 2014, and March 13, 2014, Commission and EERA staff held seven public information/scoping meetings in seven of the nine counties crossed by the proposed Sandpiper Project, pursuant to Minnesota Rule 7852.1300. The deadline for filing comments on potential human and environmental impacts and alternative pipeline routes to be considered in the comparative environmental analysis closed May 30, 2014.

Comments Received – Sandpiper

Approximately 1087 comments from 940 unique commenters and organizations were received by the close of the comment period.

The "Written comments and proposed routes and route segments" received by April 4, 2014, and May 30, 2014, appear DOC EERA website at:

[1] See Chapter 2 of the Line 3 Replacement Route Permit Application to the Minnesota Public Utilities Commission.
[2] See Chapter 6 of the Line 3 Replacement Route Permit Application to the Minnesota Public Utilities Commission.

- http://mn.gov/commerce/energyfacilities/resource.html?Id=33940 (May 30, 2014)
- http://mn.gov/commerce/energyfacilities//resource.html?Id=33833 (April 4, 2014)

The following table provides a "Comment Category Summary" of all the comments received by the comment deadline.

Comment Categorization Summary

Comment Category	Citizens	Organizations and Businesses	Local Units of Government	State Agencies	Tribal	Totals
General Opposition	402	55	1	0	1	**459**
General Support	30	5	1	1	0	**37**
Wants an EA/EIS	97	58	0	1	1	**157**
Extend Comment Period/More Mtgs	53	10	5	0	1	**69**
Need of Proj	20	1	0	0	0	**21**
State Parks	33	2	1	0	0	**36**
Trees/Forests	120	11	0	1	0	**132**
Wildlife	139	54	1	0	1	**195**
Impacts to Water Quality	320	29	4	2	2	**357**
General Env Concern	307	69	5	1	2	**384**
Soil and Soil Erosion	89	5	1	1	0	**96**
Organic Farms	133	9	1	0	0	**143**
General Agricultural Impacts	188	51	1	1	2	**243**
Health and Safety	93	10	2	1	1	**107**
Aesthetics	5	0	0	0	0	**5**
Tribal Concerns	83	45	1	0	4	**131**
Property Values	48	1	0	0	0	**49**
Cost of Easement	18	0	0	0	0	**18**
Tourism	51	5	1	0	0	**57**
Preference for an Alternative Route	309	30	4	2	2	**347**

Route Alternatives Received – Sandpiper

A route segment/alternative deviates from the applicant's preferred route to address a commenter's concern or issue. Fifty-four route alternatives (RA-01 through RA-54) were proposed during the comment period. The alternatives were suggested by the NDPC, agencies and individuals.

NDPC provided 23 of the 54 route alternatives in order to address individual landowner concerns, agency concerns, engineering constraints or constructability issues. The

Minnesota Department of Natural Resources and Minnesota Pollution Control Agency also offered suggestions for routing options, including following Enbridge's mainline corridor, the Great Lakes Natural Gas Pipeline, Highway 2 and the Soo Line railroad right-of-way. Some of these routing options vary in length from 30 to 205 miles. Many are shorter options submitted by landowners to address a specific concern related to location on their property.

Specific maps of each route alternative are included in Appendix A of the *Sandpiper Alternative Routes Summary Report and are available at:*

Route Alternative	*eDocket ID Number*	*DOC EERA Website*
RA-01 - RA-20	20147-10573-2	*http://mn.gov/commerce/energyfacilities//resource.html?Id=33938*
RA-21 - RA- 41	20147-10573-3	
RA-41 - RA- 54	20147-10574-4	

In addition, eight system alternatives were proposed – alternates that propose a different configuration of pipelines for moving oil from the Williston Basin than NDPC's proposal. The proposed system alternatives included routing the pipeline far north or far south of the NDPC's proposed route. None of the system alternatives connected to the new Clearbrook terminal. Three of the system alternatives do not connect into the Superior Terminal.

One system alternative, SA-03, which was suggested by the Minnesota Pollution Control Agency (PCA) to avoid the lakes areas crossed by NDPC's preferred route, was subsequently modified into a route alternative by including a connection to the new Clearbrook terminal.

Line 3 Meeting and Comments

Between August 11, 2015, and August 26, 2014, Commission and EERA staff will hold 14 public information/scoping meetings in 10 of the 12 counties crossed by the proposed Line 3 Replacement Project, pursuant to Minnesota Rule 7852.1300. The deadline for filing comments on potential human and environmental impacts and alternative pipeline routes to be considered in the comparative environmental analysis will close September 30, 2015. The issues and alternatives noted in this draft Scoping Document will be revised based on the comments received and Commission action on alternatives.

PREPARERS

The CEA will be prepared by the EERA staff, with the assistance of a consultant retained by the EERA. The consultant will be responsible for: compiling and reviewing the adequacy of data and reports, including those received from the proposer; preparing technical information on expected impacts of the Project; and preparing sections of the CEA. The consultant may also generate or collect data relevant to issues in the CEA. The names of those involved in EIS preparation will be given in the EIS.

SCHEDULE

A *tentative* schedule for development and issuance of the CEA is outlined below. The schedule is contingent upon a number of factors; unforeseen circumstances may alter it.

Draft Scoping Document	August 2015
Public Scoping Meetings	August 2015
Close of Public Comment Period	September 2015
Document Outlining CEA Scope filed with PUC	November 2015
PUC Review of Document Outlining CEA Scope	December 2015
CEA Release	March 2016
Public Information Meetings/Hearings	April 2016

CEA ISSUES AND ALTERNATIVES – SANDPIPER AND LINE 3

The pipeline routing rules, Minn. Rules, Chapter 7852, require the preparation of a Comparative Environmental Analysis (CEA) after the Commission has identified route and route segments to be considered at the public hearing and included in the CEA (See MN Rule, part 7852.1500).

The CEA is intended for: a) the Commission in its deliberations, b) the public, c) the public hearing, and d) as a document that informs and educates. It should:

- Present factual data and information in a clear, meaningful and useful manner that is easy to follow
- Identify measures necessary to avoid or mitigate adverse environmental effects

The issues outlined below will be analyzed in the CEA for the proposed Sandpiper Pipeline and Line 3 Replacement Pipeline projects. The CEA will describe the project and the human and environmental resources of the project area. It will provide information on the potential impacts of the project as they relate to the topics outlined in this scoping decision, including possible mitigation measures. It will identify impacts that cannot be avoided and irretrievable commitments of resources, as well as permits from other government entities that may be required for the project. The CEA will discuss the relative merits of the preferred and route site alternatives studied in the CEA using the criteria found in Minnesota Rule 7852.1900.

The CEA will include a discussion of the following human and environmental resources potentially impacted by the preferred route and the route alternatives described herein. Potential impacts, both positive and negative, of the preferred route and each alternative will be described. Based on the impacts identified, the CEA will describe mitigation measures that could reasonably be implemented to reduce or eliminate the identified impacts. The CEA will describe any unavoidable impacts resulting from implementation of the proposed project.

I. GENERAL DESCRIPTION OF THE PROJECT

A. Project Description
B. Project Purpose
C. Route Description
   1. Route Width
   2. Right-of-Way
D. Associated Facilities
E. Project Costs

II. REGULATORY FRAMEWORK

A. Certificate of Need
B. Pipeline Route Permit
C. Environmental Review Process

III. ENGINEERING AND DESIGN

IV. CONSTRUCTION

A. Right-of-Way Acquisition
B. Construction
C. Restoration
D. Operation and Maintenance

V. AFFECTED ENVIRONMENT, POTENTIAL IMPACTS, AND MITIGATIVE MEASURES

Data and analyses in the CEA will be commensurate with the importance of potential impacts and the relevance of the information to a reasoned choice among alternatives and to the consideration of the need for mitigation measures.[3] EERA staff will consider the relationship between the cost of data and analyses and the relevance and importance of the information in determining the level of detail of information to be prepared for the CEA. Less important material may be summarized, consolidated or simply referenced.

If information about potentially significant environmental effects is essential to a reasoned choice among alternatives and is not known, cannot be obtained, or the means to obtain it is not known, EERA staff will include in the CEA a statement that such information is incomplete or unavailable and the relevance of the information in evaluating potential impacts or alternatives, a brief summary of existing credible scientific evidence that is relevant to evaluating the potential significant environmental impacts; and an evaluation of such

[3] Minnesota Rule 4410.2300.

impacts from the preferred route and route alternatives based upon theoretical approaches or research methods generally accepted in the scientific community.[4]

The CEA will take into account the potential impacts of both the Sandpiper Pipeline and Line 3 Replacement project, cumulatively and separately, including impacts relative to the right-of-way needed to collocate the two lines between Clearbrook and Superior along the preferred route and all alternatives and specific characteristics of the pipelines and products to be transported through them.

A. Environmental Setting
B. Socioeconomics
C. Human Settlements
    1. Noise
    2. Aesthetics
    3. Displacement
    4. Property Values
    5. Public Services
        a) Roads and Highways
        b) Airports
        c) Utilities
        d) Emergency Services
D. Public Health and Safety
E. Land Based Economies
    1. Agriculture
        a) Compaction
        b) Tile Damage
        c) Livestock
        d) Crop production (including organic)
    2. Forestry
        - Harvestable Product within ROW
    3. Mining
        - Current and Future
    4. Recreation and Tourism
        - Snowmobile and ATV Trails
F. Archaeological and Historic Resources
G. Natural Environment
    1. Air Quality
    2. Water Resources
        a) Surface Waters and Floodplains
        b) Wild rice lakes
        c) Groundwater
            - Wellhead Protection Areas
        d) Wetlands
            - Type Conversion

[4] Minnesota Rule 4410.2500.

3. Soils
4. Flora
    - Invasive Species
    - Habitat Fragmentation
5. Fauna

H. Threatened / Endangered / Rare and Unique Natural Resources
I. Zoning and Land Use Compatibility
J. Cumulative Effects
K. Adverse Impacts that Cannot be Avoided
L. Irreversible and Irretrievable Commitments of Resources

The above outline is not intended to serve as a "Table of Contents" for the EIS document, and as such, the organization of the information and data may not be similar to that appearing in the EIS.

VI. ROUTES AND SITES TO BE EVALUATED IN THE ENVIRONMENTAL ASSESSMENT

In its August 25, 2014, Order, the Commission accepted the 53 Sandpiper route alternatives recommended by EERA in its July 17, 2014, comments and recommendations (Sandpiper Alternative Routes Summary Report) and system alternatives SA-03 as modified by the EERA for evaluation in the CEA. The Commission also accepted the seven expanded route width areas recommended by EERA and the expanded route width for Carlton County 2 requested by NDPC. [See attached tables and maps and EERA website description of the alternatives: *http://mn.gov/commerce/energyfacilities//resource.html?Id=33938*.] The CEA will analyze both the Sandpiper Pipeline and Line 3 Replacement project, cumulatively and separately, for all alternatives between Clearbrook and Superior.

VII. RELATIVE MERITS OF ALTERNATIVES

As per the Commission February 11, 2014, Order, the CEA will[5]:

- Analyze how well each route alternative meets the routing permit selection criteria set forth in statute and rule.
- Identify routes with common or similar environmental consequences.
- Identify routes that:
    - Require no environmental mitigation
    - Have negative environmental consequences that would need mitigation, together with alternative mitigation strategies
    - Have negative environmental consequences that cannot be mitigated
    - Have fatal flaws.

[5]Commission Order, dated February 11, 2014, See eDockets, Document ID 20142-96351-01, p. 8.

The routing permit selection criteria, pursuant to Minn. Rule 7852.1900 comprise the following:

A. human settlement, existence and density of populated areas, existing and planned future land use, and management plans;
B. the natural environment, public and designated lands, including but not limited to natural areas, wildlife habitat, water, and recreational lands;
C. lands of historical, archaeological, and cultural significance;
D. economies within the route, including agricultural, commercial or industrial, forestry, recreational, and mining operations;
E. pipeline cost and accessibility;
F. use of existing rights-of-way and right-of-way sharing or paralleling;
G. natural resources and features;
H. the extent to which human or environmental effects are subject to mitigation by regulatory control and by application of the permit conditions contained in part 7852.3400 for pipeline right-of-way preparation, construction, cleanup, and restoration practices;
I. cumulative potential effects of related or anticipated future pipeline construction; and
J. the relevant applicable policies, rules, and regulations of other state and federal agencies, and local government land use laws including ordinances adopted under Minnesota Statutes, section 299J.05, relating to the location, design, construction, or operation of the proposed pipeline and associated facilities.

VIII. IDENTIFICATION OF PERMITS AND PERMIT CONDITIONS

The CEA will include a list and description of permits from other government entities that may be required for the proposed project. As per the Commission February 11, 2014, Order, the CEA will[6] include a discussion of the proposed project's compliance with applicable statutes and rules, and recommendations for permit language, including language specifically drafted for certain routes.

[6]Commission Order, dated February 11, 2014, See eDockets, Document ID 20142-96351-01, p. 8.

DRAFT CEA OUTLINE

Table of Contents

TENTATIVE CEA OVERVIEW	COMMENTS
Abstract • Project Applicant • Route permit and hearings • List of Preparers	
Table of Contents • List of Appendices • List of Tables • List of Figures • List of Photos • List of Maps List of Acronyms	
SUMMARY • CEA purpose • Project description and Route Alternatives • Potential Impacts and Mitigation Measures • Relative Merits of Routing Options	
1.0 Introduction (to document) • Project description • State of Minnesota Review Process o Environmental Review o Public Hearings • CEA purpose and organization o Issues outside scope of CEA • Other permits and approvals o Pipeline Safety	
2.0 Overview of Proposed Project and alternative routes • Initially proposed route – introduce the five analysis segments • Enbridge alternatives yielding Enbridge's Revised Proposed Route	

• Other alternatives, by segment • Phased and Related Actions – Line 3 replacement and how addressing	
3.0 Land Use and Environmental Setting in Project Study Area (List out in detail)	This section should provide the reader with an overall understanding of the lay of the land in the study area. It can be drawn upon and built upon with specific in later sections.
4.0 Pipeline Impacts and Mitigation – Overview of all potential impacts and mitigation techniques (List out in detail) • Construction o Environmental Control Plans o Ag Mitigation Plan o Construction Sequence o Clean-up o Restoration • Operations and Maintenance o Reliability and safety o High consequences Areas o Integrity Management Plans o Incident Response/Emergency Response Plans o Incident Response Maps o Worst case spill scenarios • Enbridge compliance and response history	This section should cover non-route specific impacts and mitigation measure. It can be drawn upon or referenced in later sections.
5.0 Proposed Route and Route Segment Impacts and Mitigation Measures – route specific, locational specific impacts • Enbridge's initially Proposed Route compared to Enbridge's route alternatives, to establish Enbridge's Revised Proposed Route. • Comparison of Enbridge's Revised Proposed Route against other routes and route segments in the five analysis segments o North Dakota to Clearbrook o Clearbrook to Aitken County o Aitken County	By now, the reader knows the lay of the land, the alternatives being analyzed and the basics about the impacts of pipeline construction, operation and maintenance, including incident response. This section presents the data comparing the alternatives; it can draw upon and build upon information in earlier sections. This is the data sections – number of wetland crossed by type, number of home within X distance, etc. – it contains the indicators used to measure impacts.

o Carlton County o Clearbrook to Wisconsin	
6.0 Relative Merits of Routing Options • Route Permit Decision (factors in statute and rule)	This section takes the information in section 5 and applies it to the routing factors to describe the relative merits of alternatives. It should speak to factors and elements of factors, and indicators used to gage impacts. The intent is to focus the reader to those factors that distinguish one alternative from another. If there are no differences, we just say so. If the only differences lay within three factors (a elements of a factor), we say so and present the information for those factors.
10.0 References	

Section 5 will include:

- High Consequences Areas maps relative to route and route segment locations
- Incident Response Maps illustrating time and distance from routes and route segments (event access maps) relative to responders and contractors with necessary containment equipment and supplies
- List of PCA licensed land farms
- Spill scenarios should address where, time of years, uplands, wetlands, water flow, dispersal patters
- “Mitigation measures” will encompass “avoid, minimize and mitigate” as approaches to adopt in that order.

North Dakota to Clearbrook

The North Dakota to Clearbrook area includes five route alternatives.

Route Alternative Number	County	Project Section	Comment[1]	Length (miles)
RA-01	Polk	North Dakota to Clearbrook	Co-locating the proposed pipeline with the existing line 81 would reduce habitat fragmentation and there would be fewer cumulative effects	3.76
RA-02	Polk	North Dakota to Clearbrook	Route alternative requested to move pipeline further away from property owner house, Wants pipeline to be 700 feet away from home instead of 200 feet	1.61
RA-03	Polk	North Dakota to Clearbrook	Route alternative requested to minimize impacts to agricultural research sites. Avoidance of "Field 18" and moving north to drainage ditch in "Field 17" to make sure field 18 can still be used in future research	1.88
RA-04	Polk	North Dakota to Clearbrook	Route alternative to avoid an overhead power line.	0.23
RA-05	Clearwater	North Dakota to Clearbrook	Route alternative requested to accommodate refinement of facility design at the Clearbrook Terminal.	0.33

[1] Comment: The comment column is a summary of the issue that was identified in the comment submitted during notice period.

Clearbrook to Wisconsin

The Clearbrook to Wisconsin includes three route alternatives from Clearbrook to just west of the Wisconsin/Minnesota border following either existing pipelines or going north around several lakes and the Leech Lake Band of Ojibwe Reservation.

Route Alternative Number	County	Project Section	Comment[1]	Length (miles)
RA-06	Clearwater, Beltrami, Koochiching, Itasca	Clearbrook to Wisconsin	The pipeline should be routed to the north around the lakes area.	205.52
RA-07	Clearwater, Beltrami, Koochiching, Itasca	Clearbrook to Wisconsin	The pipeline should be routed with existing pipelines along highway 2. (Enbridge's mainline)	179.82
RA-08	Great Lakes Gas Pipeline	Clearbrook to Wisconsin	The pipeline should be routed with existing Great Lakes pipelines that run generally south of Hwy 2 through Beltrami, Cass, Itasca and St Louis Counties	174.22

[1] Comment: The comment column is a summary of the issue that was identified in the comment submitted during notice period.

Clearbrook to Aitkin County

The Clearbrook to Aitkin County area includes 10 route alternatives.

Route Alternative Number	County	Project Section	Comment[1]	Length (miles)
RA-09	Clearwater Hubbard	Clearbrook to Aitkin County	Alternative route starting in Section 11 of Itasca Township in Clearwater County and Hattie Township in Hubbard County to avoid the Big LaSalle Lake area.	8.05
RA-10	Clearwater	Clearbrook to Aitkin County	Big La Salle Creek alternative, lack of access near crossing of LaSalle Creek could result in delayed spill response times, suggest moving route to a crossing that is more accessible	6.83
RA-11	Clearwater	Clearbrook to Aitkin County	Route Alternative proposed to accommodate a landowner request to avoid the lake.	0.90
RA-12	Hubbard	Clearbrook to Aitkin County	Route alternative is being requested to remove a temporary workspace from adjacent land.	0.34
RA-13	Hubbard	Clearbrook to Aitkin County	Route alternative requested to route through North Dakota Pipeline Company land recently purchased.	0.18
RA-14	Hubbard	Clearbrook to Aitkin County	Route alternative being requested because two property owners want the pipeline further away from structures.	1.57
RA-15	Hubbard	Clearbrook to Aitkin County	Twin Lakes route alternative, lack of access near Twin Lakes and Shell river could result in delayed spill response times. Twin Lakes are identified as wild rice lakes by the DNR.	9.46
RA-16	Hubbard, Wadena	Clearbrook to Aitkin County	Enbridge provided a route to avoid the Crow Wing WMA due to easement restrictions.	10.46
RA-17	Cass	Clearbrook to Aitkin County	Route Alternative being proposed to avoid a large wetland complex in Foot Hill State Forest.	0.41
RA-18	Cass	Clearbrook to Aitkin County	Route alternative requested to accommodate changes to engineering design to add a pipeline inspection gauge launcher and receiver trap.	0.18
RA-19	Cass	Clearbrook to Aitkin County	Route alternative requested that the pipeline be constructed near an existing fence line.	1.11
RA-20	Aitkin	Clearbrook to Aitkin County	DNR requested a wider route south of the Spire Valley Fish Hatchery to minimize impacts the hatchery.	1.25

[1] Comment: The comment column is a summary of the issue that was identified in the comment submitted during notice period.

Aitkin County

The Aitkin County area includes 23 route alternatives.

Route Alternative Number	County	Project Section	Comment[1]	Length (miles)
RA-21	Aitkin	Aitkin County	DNR recommended the Aitkin County Power Line as a route alternative to eliminate concerns regarding Sandy River fisheries and wild rice habitat as well as trout stream habitat. This would also avoid 3.1 miles of WMA's and follows existing corridor.	53.88
RA-22	Aitkin, St Louis, Carlton	Aitkin County	DNR recommended a route alternative that would avoid critical habitat in the Big Sandy lake watershed as well as Grayling Marsh WMA, McGregor WMA, Lawler WMA and Salo Marsh WMA.	38.82
RA-23	Aitkin	Aitkin County	The Aitkin County Soo Line Route Alternative was considered in the Enbridge January 31, 2014 Permit Application but removed from further analysis by the company.	31.13
RA-24	Aitkin	Aitkin County	Commenter proposing route alternative to minimize forest fragmentation and avoid old growth forests in the Hill River State Park	1.65
RA-25	Aitkin	Aitkin County	Commenter would like the route to move to the east across wetland (former rice paddy areas) to preserve all high land for future building plans.	0.61
RA-26	Aitkin	Aitkin County	Commenter would prefer route alternative that would veer south and southeast from the intersection of US Highway 169 and CSAH 3 west of Palisade.	3.41
RA-27	Aitkin, Carlton	Aitkin County	DNR is recommending that the analysis includes the Soo line to avoid the McGregor SNA and the Sandy River watershed	13.23
RA-28	Aitkin	Aitkin County	Commenter suggested a route alternative that turns south in Aitkin County and meets back with the proposed route to the east.	3.50
RA-29	Aitkin	Aitkin County	Commenter suggested a route alternative suggested accommodating landowner request related to future home sites along the road.	0.66
RA-30	Aitkin	Aitkin County	Route alternative requested to avoid bending the pipeline in the road ditch which could impact the integrity of the roadway.	0.07
RA-31	Aitkin	Aitkin County	Commenter requested a route alternative to cut straight and diagonally across several miles in Aitkin County.	6.12
RA-32	Aitkin	Aitkin County	Commenter is requesting that the pipeline be located on Aitkin County Tax forfeit land which avoids an Old Growth Forest.	0.45
RA-33	Aitkin	Aitkin County	Commenter would like the pipeline moved east to the back edge of his property where it joins with the Peat Plant.	1.80

Route Alternative Number	County	Project Section	Comment[1]	Length (miles)
RA-34	Aitkin	Aitkin County	Commenter suggesting shifting the pipeline north into the tree line.	2.22
RA-35	Aitkin	Aitkin County	Commenter suggesting route alternative that would cut south on township road 270th and traverse east until it meets with the proposed route.	1.72
RA-36	Carlton	Aitkin County	Commenter suggesting a route alternative to shift the pipeline to the north into tree line.	0.38
RA-37	Aitkin, Carlton	Aitkin County	Commenter suggesting Route Alternative that would parallel Hwy 210 after mile marker 550 then turn south to reconnect with the proposed route south of Cloquet.	38.68
RA-38	Aitkin, Carlton	Aitkin County	Commenter suggested a Route Alternative to avoid the Salo Marsh WMA.	6.73

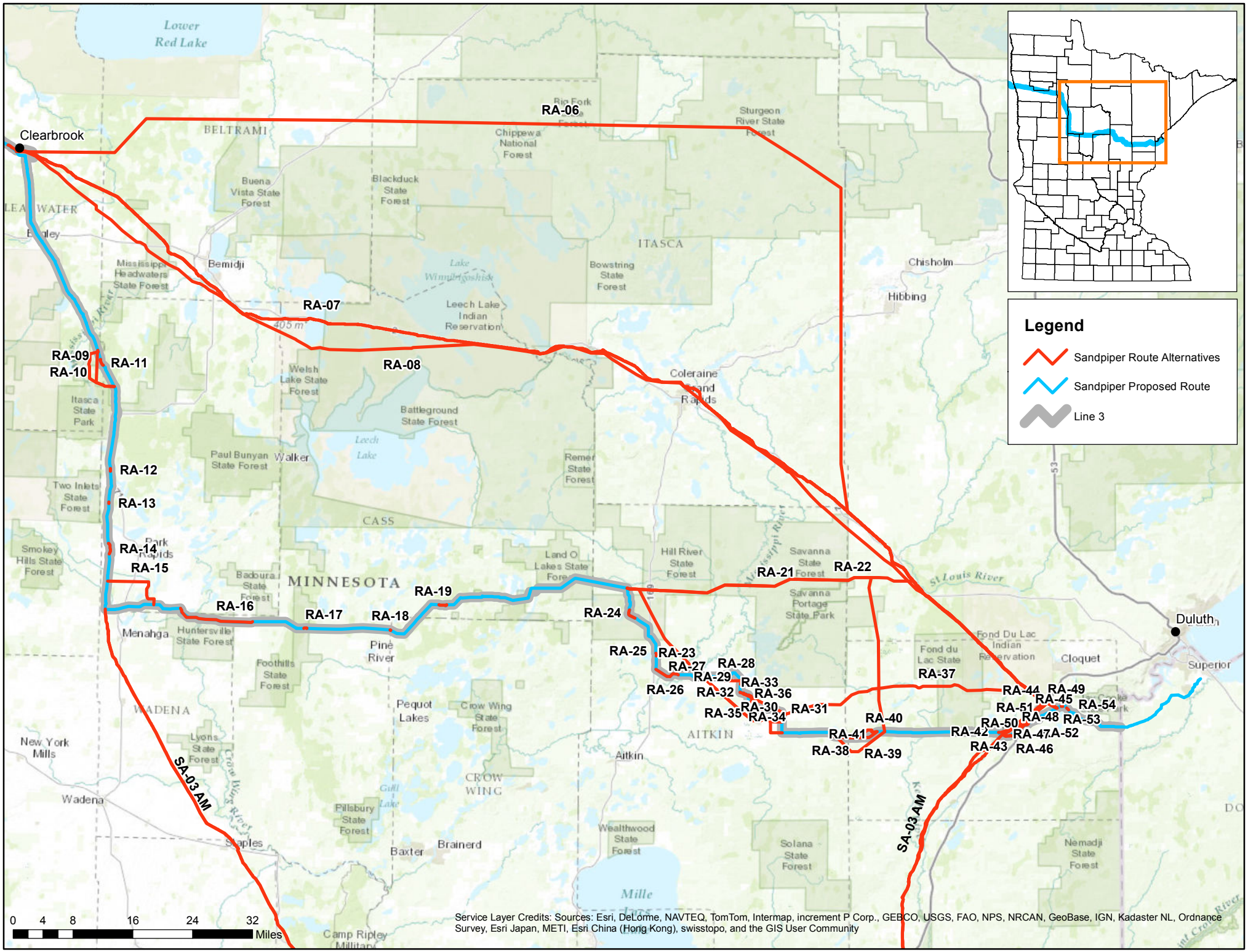
[1] Comment: The comment column is a summary of the issue that was identified in the comment submitted during notice period.

Carlton County

The Carlton County area includes thirteen route alternatives.

Route Alternative Number	County	Project Section	Comment[1]	Length (miles)
RA-39	Carlton and Aitkin	Aitkin County	Commenter would prefer route alternative that veers south of proposed route near Salo Marsh WMA Impoundment to avoid mineral development land.	9.01
RA-40	Carlton	Carlton County	Commenter suggested a route to use county land to the north of property owners land.	1.04
RA-41	Carlton	Carlton County	Commenter suggested shifting the pipeline south to avoid a beaver dam.	0.61
RA-42	Carlton	Carlton County	Commenter requesting to co-locate pipeline with an existing power line corridor.	3.48
RA-43	Carlton	Carlton County	Commenter suggesting to move pipeline to north side of Hwy 61, co-locating it with a utility corridor.	3.08
RA-44	Carlton	Carlton County	Commenter suggested following and existing utility corridor on the north side of Highway 61 to avoid the Blackhoof watershed.	7.66
RA-45	Carlton	Carlton County	Commenter suggested following south side of Highway 61 to avoid the Blackhoof Watershed	7.13
RA-46	Carlton	Carlton County	Commenter suggested shifting the pipeline to the south, running parallel to County Road 61.	1.91
RA-47	Carlton	Carlton County	Route alternative requested moving the pipeline south to avoid a grove of trees.	0.85
RA-48	Carlton	Carlton County	Commenter suggested shifting the pipeline to the other side of I-35 to avoid cutting off access road.	1.28
RA-49	Carlton	Carlton County	Commenter requested to follow the south sides of I-35 and Highway 61 to distance pipeline from multiple properties.	5.96
RA-50	Carlton	Carlton County	Commenter requested to reduce the number of Blackhoof River crossings.	0.56
RA-51	Aitkin	Carlton County	Commenter proposed shifting the pipeline north to follow the tree line and distance it from homesteads.	1.41
RA-52	Aitkin	Carlton County	Commenter proposed shifting the pipeline north to follow the tree line and distance it from homesteads.	0.84
RA-53	Carlton	Carlton County	Enbridge requested route alternative to avoid multiple crossings of an overhead power line.	0.20
RA-54	Carlton	Carlton County	Commenter suggested locating the pipeline closer to an existing natural gas line.	0.31

[1] Comment: The comment column is a summary of the issue that was identified in the comment submitted during notice period.


Clearbrook
RA-06
RA-07
RA-08
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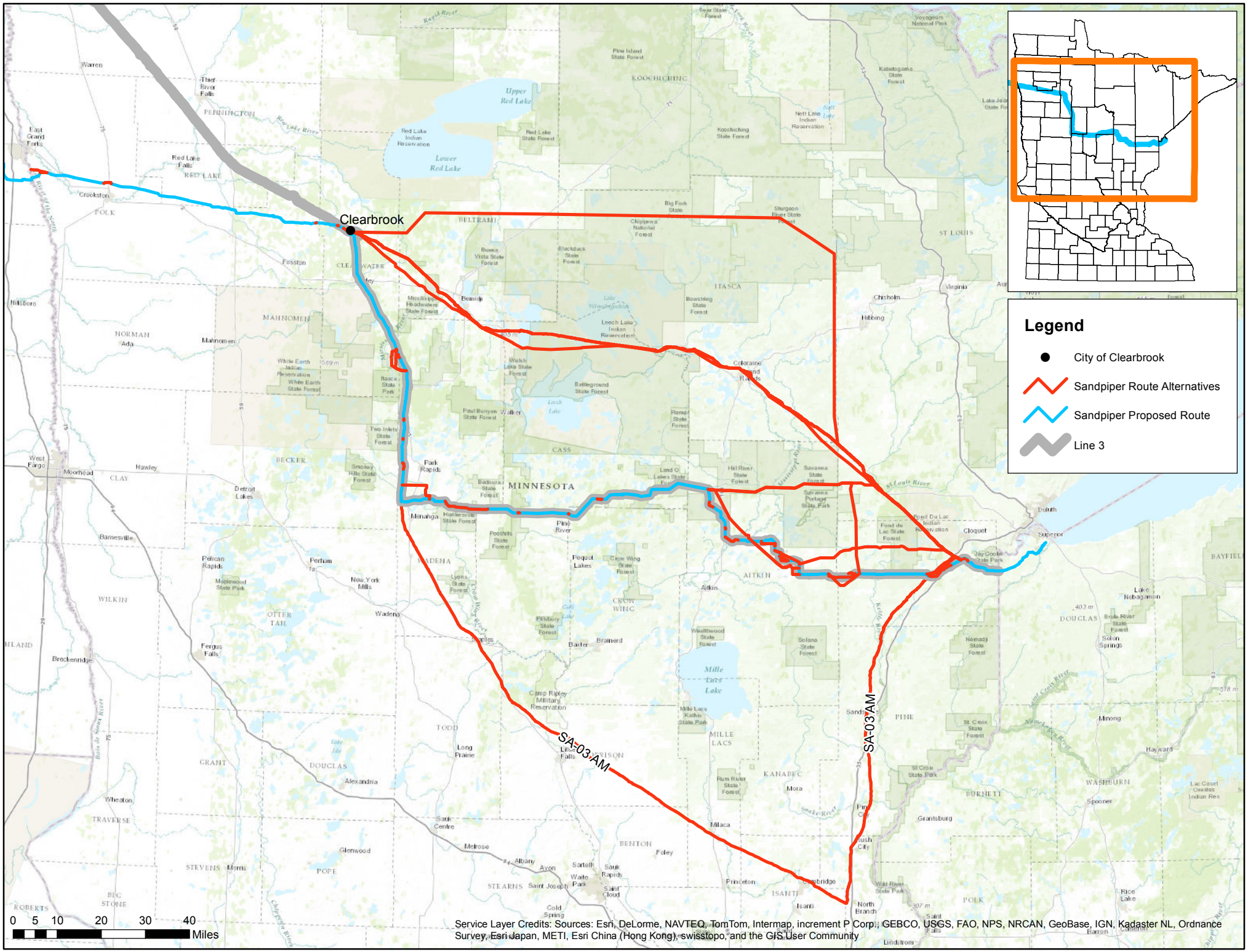
RA-53
RA-54
SA-03 AM
SA-03 AM
Legend
Sandpiper Route Alternatives
Sandpiper Proposed Route
Line 3
Duluth
Superior
Bemidji
Walker
Hibbing
Chisholm
Brainerd
Baxter
Aitkin
Menahga
Wadena
Staples
New York Mills
Park Rapids
Coleraine
Cloquet
BELTRAMI
ITASCA
CASS
MINNESOTA
CROW WING
AITKIN
Lower Red Lake
Leech Lake Indian Reservation
Fond du Lac Indian Reservation
Chippewa National Forest
Bowstring State Forest
Battleground State Forest
Hill River State Forest
Savanna State Forest
Savanna Portage State Park
Land O Lakes State Forest
Remer State Forest
Welsh Lake State Forest
Paul Bunyan State Forest
Two Inlets State Forest
Itasca State Park
Mississippi Headwaters State Forest
Buena Vista State Forest
Blackduck State Forest
Sturgeon River State Forest
Hunterville State Forest
Foothills State Forest
Badoura State Forest
Smokey Hills State Forest
Lyons State Forest
Pillsbury State Forest
Pequot Lakes
Crow Wing State Forest
Wealthwood State Forest
Solana State Forest
Nemadji State Forest
Fond du Lac State Forest
Pine River
St Louis River
Mille Lacs
Camp Ripley Military
0 4 8 16 24 32 Miles
Service Layer Credits: Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, and the GIS User Community


Clearbrook
SA-03-AM
SA-03-AM
Legend
City of Clearbrook
Sandpiper Route Alternatives
Sandpiper Proposed Route
Line 3
0 5 10 20 30 40
Miles
Service Layer Credits: Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, and the GIS User Community